Please add the following new claims 23- 44:

Sub B2

23. (New) A hybrid modular polyketide synthase (PKS) comprising at least a first naturally occurring extender module and a second naturally occurring extender module,

wherein a C-terminus of said first module is covalently linked to an N-terminus of a naturally occurring intra-molecular linker (RAL) or inter-molecular linker (ERL) and an N-terminus of the second module is covalently linked to a C-terminus of said RAL or ERL, and

wherein either said first module or second module is not covalently linked to said RAL or ERL in a naturally occurring polyketide synthase.

24. (New) The hybrid modular PKS of claim 23 wherein said RAL or ERL is the RAL or ERL of a first naturally occurring PKS and at least one of the first module or second module is an extender module of a second PKS different from the first PKS.

Cancel Sub B3

25. (New) The hybrid modular PKS of claim 23 wherein said RAL is selected from the group consisting of M2 *ery*, M4 *ery*, M6 *ery*, M2 *rif*, M3 *rif*, M5 *rif*, M3 *rap*, M4 *rap*, and M7 *rap* intra-module linkers.

26. (New) The hybrid modular PKS of claim 23 wherein the ERL is selected from the group consisting of M3 *ery*, M5 *ery*, M4 *rif*, M7 *rif*, M8 *rif*, M9 *rif*, M5 *rap*, and M11 *rap* inter-module linkers.

27. (New) The hybrid modular polyketide synthase of claim 23 wherein said C-terminus of said first module being covalently linked to said N-terminus of a naturally occurring intra-molecular linker (RAL) or inter-molecular linker (ERL) and said N-terminus of the second module being covalently linked to said C-terminus of said RAL or ERL facilitates the transfer of a nascent polyketide chain from said first module to said second module.

Sub B4

28. (New) The hybrid modular polyketide PKS of claim 27 which contains *ery* modules 1, and 3-6 and tylosin module 2, and wherein said polyketide chain is transferred from *ery* module 1 to *tyl* module 2 and then to *ery* modules 3-6.

29. (New) The hybrid modular polyketide PKS of claim 27 which contains *ery* modules 1-5 and narbomycin module 6, wherein said polyketide chain is transferred from *ery* modules 1-5 to *nar* module 6.

30. (New) The hybrid modular polyketide PKS of claim 27 which contains modules 1 and 3-6 of *ery* and modules 2-3 of tylosin, spiramycin or niddamycin, wherein said polyketide chain is transferred from *ery* module 1 to modules 2-3 of tylosin, spiramycin or niddamycin and then to *ery* modules 3-6.

31. (New) The hybrid modular polyketide PKS of claim 27 which contains modules 1-3 of tylosin, spiramycin or niddamycin and modules 3-6 of *ery*, and wherein said polyketide chain is transferred from modules 1-3 of said tylosin, spiramycin or niddamycin to *ery* modules 3-6.

32. (New) The hybrid modular polyketide PKS of claim 27 which contains a module of tylosin, spiramycin or niddamycin and modules 1-2 and 3-6 of *ery*, wherein said polyketide chain is transferred from *ery* modules 1-2 to the tylosin, spiramycin or niddamycin module and then to *ery* modules 3-6.

33. (New) The hybrid modular polyketide PKS of claim 27 which contains modules 1 and 3-6 of *ery* and module 5 of tylosin, spiramycin or niddamycin having the enoyl reductase catalytic activity inactivated, wherein said polyketide chain is transferred from *ery* module 1 to module 5 of tylosin, spiramycin or niddamycin and then to *ery* modules 3-6.

34. (New) The hybrid modular polyketide PKS of claim 27 which contains *ery* modules 1-4 and 6 and module 6 of spiramycin or niddamycin, wherein said polyketide chain is

transferred from *ery* modules 1-4 to module 6 of spiramycin or niddamycin and then to *ery* module 6.

35. (New) The hybrid modular polyketide PKS of claim 27 which contains module 1 of FK-506 or 520 and modules 2-14 of rapamycin, wherein said polyketide chain is transferred from module 1 of FK-506 or 520 and then to modules 2-14 of rapamycin.

36. (New) The hybrid modular polyketide PKS of claim 27 which contains module 1 and 11-14 of rapamycin and modules 2-6 of FK-506 or 520 wherein said polyketide chain is transferred from module 1 of rapamycin to modules 2-6 of FK-506 or 520 and then to modules 11-14 of rapamycin.

37. (New) The hybrid modular polyketide PKS of claim 27 which contains module 1 of rapamycin, modules 2-7 of FK-506 or 520 and modules 12-14 of rapamycin, wherein said polyketide chain is transferred from module 1 of rapamycin to modules 2-7 of FK-506 or 520 and then to modules 12-14 of rapamycin.

38. (New) The hybrid modular polyketide PKS of claim 27 which contains module 1 of rapamycin, modules 2-8 of FK-506 or 520 and modules 13-14 of rapamycin, wherein said polyketide chain is transferred from module 1 of rapamycin to modules 2-8 of FK-506 or 520 and then to modules 13-14 of rapamycin.

39. (New) The hybrid modular polyketide PKS of claim 27 which contains modules 1-10 of rapamycin and modules 7-10 of FK-506 or 520, wherein said polyketide chain is transferred from modules 1-10 of rapamycin to modules 7-10 of FK-506 or 520.

40. (New) A nucleic acid molecule comprising a nucleotide sequence encoding the hybrid modular PKS of claim 23.

41. (New) The nucleic acid molecule of claim 40 wherein said nucleotide sequence is operably linked to control sequences for its expression.

42. (New) A method to prepare a hybrid modular polyketide synthase which method comprises culturing cells containing the nucleic acid molecule of claim 41.

43. (New) A method to prepare a hybrid modular polyketide which method comprises providing substrate to the polyketide synthase prepared by the method of claim 42.

44. (New) The method of claim 43 wherein said providing is in a cell-free system.